

IN THE CLAIMS

The pending claims are provided herein for the Examiner's convenience.

1. (Original) A microelectronic device comprising:
a package core having an opening therein;
a microelectronic die located within the opening of said package core; and
a fiber reinforced encapsulation material within the opening of said package core to hold said microelectronic die within said package core, said fiber reinforced encapsulation material including a polymeric resin having a fibrous filler material.
2. (Original) The microelectronic device of claim 1, wherein:
said fibrous filler material includes individual fibers having a length between 1 micrometer and 40 micrometers.
3. (Original) The microelectronic device of claim 1, wherein:
said fibrous filler material includes individual fibers having a length to width ratio that is no less than 5.
4. (Withdrawn) The microelectronic device of claim 1, wherein:
said fibrous filler material includes glass fibers.
5. (Original) The microelectronic device of claim 1, wherein:
said fibrous filler material includes carbon fibers.
6. (Withdrawn) The microelectronic device of claim 1, wherein:
said fibrous filler material includes Kevlar® fibers.

7. (Withdrawn) The microelectronic device of claim 1, wherein:
said fibrous filler material includes ceramic fibers.
8. (Withdrawn) The microelectronic device of claim 1, wherein:
said fibrous filler material includes metal fibers.
9. (Original) The microelectronic device of claim 1, wherein:
said polymeric resin includes epoxy.
10. (Original) The microelectronic device of claim 1, wherein:
said polymeric resin includes plastic.
11. (Original) The microelectronic device of claim 1, comprising:
at least one metallization layer built up over said package core, said at least one metallization layer being conductively coupled to bond pads on a surface of said microelectronic die.
12. (Withdrawn) A microelectronic device comprising:
a package substrate;
a microelectronic die mechanically coupled to said package substrate, said microelectronic die having a plurality of electrical contacts that are conductively coupled to contacts on said package substrate; and
a fiber reinforced encapsulation material mechanically coupled to said microelectronic die to provide structural support for said microelectronic die, said fiber reinforced encapsulation material including a polymeric resin having a fibrous filler material.
13. (Withdrawn) The microelectronic device of claim 12, wherein:
said fiber reinforced encapsulation material forms a fillet between said microelectronic die and said package substrate.

14. (Withdrawn) The microelectronic device of claim 12, wherein:
said fiber reinforced encapsulation material forms a globule covering said microelectronic die.
15. (Withdrawn) The microelectronic device of claim 12, wherein:
said package substrate includes a flexible circuit board.
16. (Withdrawn) The microelectronic device of claim 15, wherein:
said fiber reinforced encapsulation material fills a region between said microelectronic die and said flexible circuit board.
17. (Withdrawn) The microelectronic device of claim 12, wherein:
said fibrous filler material includes individual fibers having a length between 1 micrometer and 40 micrometers and a length to width ratio that is no less than 5.

Claims 18-24 (Canceled)

25. (Withdrawn) A microelectronic device comprising:
a flexible circuit board including a first side and a second side;
a microelectronic die attached to the first side;
a compliant buffer on the first side of the flexible circuit board, wherein the compliant buffer is between the die and the flexible circuit board; and
a fiber reinforced encapsulation material to hold the microelectronic die to the flexible circuit board.
26. (Withdrawn) The microelectronic device according to claim 25, further including:
an opening in the flexible circuit board;
a bond pad on the microelectronic die; and
a bond ribbon that extends from the bond pad, through the opening, to the second side.

27. (Withdrawn) The microelectronic device according to claim 25, further including:
an opening in the flexible circuit board;
a bond pad on the microelectronic die;
a bond ribbon that extends from the bond pad, through the opening, to the second side;
and
a contact structure attached on the second side.
28. (Withdrawn) The microelectronic device according to claim 25, further including:
an opening in the flexible circuit board;
a bond pad on the microelectronic die;
a bond ribbon that extends from the bond pad, through the opening, to the second side;
and
a solder ball contact structure attached on the second side.
29. (Withdrawn) The microelectronic device according to claim 25, wherein the fiber reinforced encapsulation material includes a fiber selected from glass, carbon, Kevlar®, ceramic, and metal.
30. (Withdrawn) The microelectronic device according to claim 25, wherein the fiber reinforced encapsulation material includes a fiber selected from glass, carbon, Kevlar®, ceramic, and metal, and wherein the fiber has a length between 5 and 40 micrometers and a diameter between 0.5 and 5 micrometers.
31. (Withdrawn) The microelectronic device according to claim 25, wherein the fiber reinforced encapsulation material includes a polymeric resin selected from epoxy and plastic.